nearly so favourite a foodplant of *A. crataegi* as the various pomaceous *Rosaceae* (*Pyrus*, *Crataegus*, etc.). I have, however, seen none on any pear-trees, some nests on one turned out to be *Porthesia chrysorrhoea*. A little amelanchier tree, a tree not very common here, of which the buds were just beginning to break, had a number of nests with larvæ not half-an-inch long, so many that the survival of any considerable proportion of them must tend to their general starvation. I also found half-a-dozen larvæ of *Crinopteryx familiella* at a spot where they had obviously been fairly numerous very recently. It would usually be difficult to find one after the middle of February.

March 26th.—I have been noting the conditions of existence of *Lozopera deaurana*. It is really scarce, as it is difficult to find the dead stems of *Smyrnium* in which the pupæ are. The plant is abundant enough, but the dead plants appear to be such ideal firelighting material, that they are very strictly collected for that purpose, and not one in a hundred that the growing plants declare must have existed can be found. It is astonishing that the species can survive when so large a holocaust is annually levied. One would hardly expect the few moths that came through could lay eggs enough to supply all the plants with larvæ, yet this must nearly be so, as almost all suitable stems that remain contain pupæ, though certainly not always. The human element of destruction is, no doubt, also helpful in making the plant grow, as it seems to affect human vicinity. A small ant is also destructive, using the holes of the larvæ to reach the hollows of the stems, probably, however, they are most destructive to larvæ whose habitations are defective and these are usually, more often than not, ichneumoned. The ant may then be, after all, more helpful than destructive. It may be remembered that the use of the stems as firewood was extremely destructive to this species at the Ile Ste. Marguerite, near Cannes.

Rare and local species of Coleoptera taken in Cumberland.

By H. BRITTEN.

The following species taken in Cumberland are described as very rare by Fowler in his *British Coleoptera*, or as not occurring in the north of England:—*Notiophilus quadriguttatus*, Dej., one specimen with two pores on the left elytron and only one on the right; *Dyschirius politus*, Dej., one specimen in Baron Wood, May 21st, 1902; *Miscodera arctica*, Payk., local on Wan Fell and Cross Fell, beneath stones; *Pterostichus lepidus*, F., very local, on Wan Fell; *Amara patricia*, Duft., one specimen on Wan Fell; *Bembidium nigricorne*, Gyll., abundant on sheep tracks on heaths, Wan Fell and Cumrew Fell; *Trechus discus*, F., two specimens taken on the banks of the Eden, August 2nd, 1900; *Hydroporus incognitus*, Sharp, very local in one mossy hole on Wan Fell, abundant March 23rd, 1902; *H. ferrugineus*, Steph., taken in a drain, Great Salkeld, May 19th, 1901, specimens are taken nearly every year at the mouth of this drain; *H. obsoletus*, Aubé., rare in flood refuse, Great Salkeld; *Platambus maculatus*, L., ab. *immaculatus*, Donis., abundant in Lake Ulleswater, unaccompanied by the type; *Hydrobius fuscipes*, L., var. *aeneus*, Sol., three specimens taken at Burgh-on-Sands, April 5th, 1902; *Aleochara cuniculorum*, Kraatz., common in rabbit-burrows;

A. villosa, Mann., three specimens in a stable yard, Great Salkeld; *Microglossa suturalis*, Mann., abundant in barns and cow-houses, Great Salkeld; *Oxypoda vittata*, Maerk., scarce in haystack refuse, Great Salkeld; *O. tarda*, Sharp, abundant on a sandbank near Great Salkeld, April 9th, 1903; *Calodera umbrosa*, Er., one specimen at roots of rushes, Great Salkeld, May 7th, 1903; *Dinarda maerkeli*, Kies., one specimen with *Formica rufa*, Keswick, April 13th, 1906; *Notothecta flavipes*, Grav., common with *Formica rufa*, Keswick, April 13th, 1906; *N. anceps*, Er., three specimens with *Formica rufa*, Keswick, April 13th, 1906; *Homalota longula*, Heer, common amongst shingle on the banks of the Eden, Great Salkeld: *H. subtillissima*, K., abundant beneath stones on damp shingle, banks of Eden, Great Salkeld; *H. angustula*, Gyll., on muddy margins of the river Eden, Great Salkeld; *H. cuspidata*, Er., common beneath bark of elm, ash, and fir trees, Great Salkeld; *H. cavifrons*, Sharp, local, at roots of grass and in moss, Great Salkeld; *H. pallens*, Redt., common beneath stones on damp shingle, banks of Eden, Great Salkeld; *H. parallela*, Mann., abundant in nests of *Formica rufa*, Keswick, April 13th, 1906; *H. hepatica*, Er., rare, a fine ♂, sweeping at Cumrew, June 2nd, 1903; *H. coriaria*, Kr., not common in birds' nest, Great Salkeld; *H. autumnalis*, Er., two ♂ s on banks of a pond, Edenhall, May 13th, 1906; *H. mortuorum*, Thoms., is abundant in carrion, dead leaves, decaying vegetable matter, etc., in this district; *Ischnopoda caerulea*, Sahl., not uncommon on the banks of the Eden, Great Salkeld; *Falagria sulcatula*, Gr., scarce in flood refuse in Baron Wood, January 30th, 1903; *Placusa complanata*, Er., abundant in the galleries of *Hylophilus piniperda*, L., on Scotch fir, this is a very local insect, and I only find it in one small wood near Great Salkeld; *Epipeda plana*, Gyll., scarce under bark of dead elm; *Hygronoma dimidiata*, Gr., scarce, sweeping rushes and sedges in a bog; *Hetherothops praevia*, Er., taken in a cowshed amongst decaying straw, Great Salkeld; *Oligota atomaria*, Er., rare, one specimen at grass roots, Great Salkeld, April 3rd, 1905; *Quedius longicornis*, Kr., rare, one specimen in flood refuse, one specimen from a rabbit burrow, and one specimen from a mole's run, Great Salkeld; *Quedius vexans*, Epp., from moles' nests, Great Salkeld, November 21st, 1906; *Quedius scitus*, Gr., one specimen in a rotten fir log, Edenhall, January 13th, 1907; *Q. obliteratus*, Er., one specimen in moss, Silloth, September 20th, 1905; *Lathrobium terminatum*, Grav., var. *immaculatum*, Fow., not uncommon in a bog near Great Salkeld, the type is not found in this district; *Medon obsoletus*, Nord., one specimen in vegetable refuse; *Stenus argus*, Grav., abundant in a marsh near Penrith; *S. aerosus*, Er.; *S. annulatus*, Crotch, scarce in moss, Wan Fell; *S. niveus*, Fauv., abundant sweeping in marshes; *Trogophloeus rivularis*, Mots., scarce on the muddy margins of ponds and streams; *Olophrum fuscum*, Grav., in moss and at the roots of rushes, not uncommon; *Homalium septentrionis*, Thoms., common in dead rabbits; *H. caesum*, Gr., var. *tricolor*, Rey., two specimens in dead leaves; *H. gracilicorne*, Fairm., scarce beneath dead fir bark, also under birch bark and in fungi on birch; *Hapalaraea pygmaea*, Pk., one specimen in a fungus on an ash-tree; *Agathidium seminulum*, L., two specimens in rotten wood; *Hydnobius punctatissimus*, Steph., one specimen in flood refuse; *Triarthron maerkeli*, Schm., one specimen in flood refuse; *Choleva* *intermedia*, Kr., in rabbit burrows; *Colon dentipes*, Sahlb., one specimen at rest on a fence post; *Neuraphes angulatus*, Müll., one specimen in moss; *N. rubicundus*, Shm., one specimen in rotten wood; *N. sparshalli*, Den., one specimen in rotten wood; *N.* var. *minutus*, Chand., four specimens in haystack refuse; *Pselaphus dresdensis*, Hbst., abundant in moss, but very local; *Tychus niger*, Payk., not uncommon in rotten wood, amongst moss, and in dead leaves; *Bythinus palidus*, Aub., locally abundant in moss and in grass roots; *Euplectus sanguineus*, Den., in decaying straw, scarce; *E. piceus*, Mots., in rotten wood, moderately common; *E. ambiguus*, Reich., abundant by sweeping in a swamp and also in moss in marshy places; *E. minutissimus*, Aub., one specimen under a stone embedded in damp sand in company with *Homalota subtillissima*, *pallens*, and *Thinobius linearis*, April 6th, 1906, this was previous to J. J. Walker noting this species; *Ptinella aptera*, Guer., beneath bark on a dead ash-tree; *Tricopteryx bovina*, Mots., common in old dry horse- and cow-dung; *Orthoperus atomus*, Gyll., local but not uncommon in refuse in hedge bottoms; *Olibrus aeneus*, F., one specimen on carrion, a very strange place to find this species, this is the only record for the county; *Halyzia* 16-*guttata*, L., one specimen in flood refuse; *Scymnus haemorrhoidalis*, Hbst., several specimens from flood refuse and sweeping beneath hedges; *Chilocorus similis*, Ross., one specimen by beating willow bushes; *C. bipustulatus*, L., not uncommon by beating willow bushes on heaths; *Alexia pilifera*, Müll., locally abundant in moss in fir woods; *Hister bissexstriatus*, F., one specimen in carrion; *Hister* 12-*striatus*, Schl., in carrion, not common; *Pachylopus maritimus*, Steph., common in dung and carrion in the Solway district; *Acritus minutus*, Hbst., in decaying straw at Silloth, in numbers; *Meligethes viduatus*, Stm., a rare find amongst the flowers of *Geum rivale; Monotoma conicicollis*, Aub., common in nests of *Formica rufa* at Keswick; *Enicmus testaceus*, Steph., scarce in fungi on alder; I believe Mr. Day has recorded my supposed capture of *E. rugosus*, Herbst, this record will have to be deleted in favour of a new British species which is in hand at the present time, and will be duly recorded in the *Ent. Mo. Mag.; Cartodere ruficollis*, Marsh., very common in haystack refuse in this district; *C. filiformis*, Gyll., two specimens taken in my house during 1906; *Telmatophilus caricis*, Ol., common, sweeping amongst *Sparganium*; *Cryptophagus lycoperdi*, Hbst., in a small puff-ball in Baron Wood; *Atomaria diluta*, Er., in flood refuse, scarce; *Myectophagus atomarius*, F., one specimen in fungus; *Tiresias serra*, F., under bark, not common; *Florilinus musaeorum*, L., abundant on the walls of my house and in flowers; *Aspidiphorus orbiculatus*, Gyll., scarce in fungi on old stumps; *Geotrupes typhaeus*, L., abundant on sandy heaths; *Malthodes pellucidus*, Kies, abundant by beating and sweeping; *Phlaeophilus edwardsi*, Steph., common on fence posts round a wood during the autumn and winter months; *Ptinus subpilosus*, Müll., rare, beneath the bark of a sycamore tree; *Hedobia imperialis*, L., bred from white cocoons taken beneath bark on dead crab stumps in hedges; *Dryophilus pusillus*, Gyll., abundant on larch trees; *Anobium paniceum*, L., bred in numbers amongst garden seeds; *Cis micans*, F., in fungi on beech; *C. hispidus*, Payk., in fungi on ash; *C. lineatocribratus*, Mel., in fungi on birch; *Asemum striatum*, L., abundant in stumps of Scotch fir; *Donacia obscura*, Gyll., by sweeping amongst *Carex* in May; *D. affinis*, Kunz., by sweeping in a marshy place amongst rushes, *Carex* and *Scirpus; Chrysomela varians*, Schal., breeds yearly on a patch of *Hypericum perforatum; Clinocara undulata*, Kr., abundant beneath bark on fallen oak branches; *Salpingus aeratus*, Muls., flying round heaps of dead branches and also beaten in some numbers from dead whitethorn branches; *S. foveolatus*, Ljun., taken in some numbers on fence posts during the winter months; *Oedemera lurida*, Marsh., one specimen by sweeping; *Meloë proscarabaeus*, L., var *cyaneus*, Muls., not uncommon with the type; *Apion pallipes*, Kirb., by sweeping *Allium ursinum* when in flower; *A. confluens*, Kirb., on *Matricaria inodora; Apion tenue*, Kirb., scarce, by general sweeping; *Trachyphlaeus aristatus*, Gyll., scarce at roots of grass but widely distributed; *Orthochaetes setiger*, Beck., scarce in moss and at grass roots; *Erirhinus aethiops*, F., one specimen in flood refuse in Borrowdale; *Bagous claudicans*, Boh., in refuse on edge of a pond; *Poophagus nasturtii*, Germ., local and scarce on *Nasturtium officinale; Ceuthorhynchidius nigrinus*, Marsh., scarce, by beating sallows; *C. posthumus*, Germ., common on its foodplant, *Tesdalia*, when in flower; *Eubrychius velatus*, Beck., in refuse on margin of a pond, and by fishing amongst *Myriophyllium* in the pond in company with the following species; *Litodactylus leucogaster*, Marsh., abundant in refuse on banks of the pond and on submerged logs, and by fishing amongst *Myriophyllium* in the pond; *Phytobius muricatus*, Bris., abundant in damp moss in a swamp; *Balaninus pyrrhoceras*, Marsh., not uncommon beating oak; *Magdalis pruni*, L., scarce beating blackthorn; *Trypodendron lineatum*, Ol., burrowing in the roots of newly-cut spruce fir, scarce.

Synopsis of the Orthoptera of Western Europe.

By MALCOLM BURR, B.A., F.L.S., F.Z.S., F.E.S.

(*Continued from* p. 71).

GENUS VIII: CTENODECTICUS, Bol.

Characterised by the small size and the form of the posterior tarsi and the anal segment of the male. The plantulæ are longer than the first two tarsal segments taken together, and the posterior tibiæ have two terminal spines; the anal segment of the male is strongly decurved and covers the cerci; the prosternum is unarmed, and the anterior tibiæ have three spines above. Five species are known.

TABLE OF SPECIES.

1. Elytra free; cerci ♂ not entirely covered by anal segment; posterior femora short (7·5mm.-8·5mm.)	1. MASFERRERI, Bol.
1.1. Elytra covered by pronotum; anal segment almost entirely covering cerci in ♂; femora longer (10mm.-13mm.).	
2. Hinder femora with two bands; whole lower margin of side flaps bordered with white; hinder tibiæ with two apical spines beneath; Spanish species	2. PUPULUS, Bol.
2.2. Hinder femora with one longitudinal black band; side flaps of pronotum with only hinder border white; posterior tibiæ with four apical spines beneath; Sardinian and Algerian species	3. BOLIVARI, Targ.